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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,677	10/17/2006	Heather K. Kranz	58913US004	1712
32692 7590 10/17/2008 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER				
NELSON, MICHAEL B				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
10/17/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/564,677

Applicant(s)

KRANZ ET AL.

Examiner

MICHAEL B. NELSON

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-42 is/are pending in the application.
- 4a) Of the above claim(s) 43-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 31-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/86)
Paper No(s)/Mail Date 05/01/06; 08/14/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Election/Restrictions

1. Applicant's election to group I, claims 31-42 with traverse in the reply filed on 07/25/08 has been acknowledged. Applicant's traversal was on the grounds that the prior art cited by the examiner in the restriction requirement did not show that the special technical feature shared between the two inventive groups was known by those having ordinary skill in the art. Applicant's arguments are found persuasive in that the schematic diagram of Fig. 2 in Sperger et al. is not adequate disclosure to show that the selective edge sealing (i.e. fusing of the peripheral edge only) of polymeric films was known to those of ordinary skill. However, these arguments are moot in light of the new grounds for restriction which show that the special technical feature was in fact known to those having ordinary skill in the art at the time of the invention (See Below). As such, the restriction is deemed proper and the claims currently under examination on the merits are **31-42** with claims 43-50 being withdrawn from consideration as being directed to non-elected subject matter. Some of applicant's arguments are addressed in the Response to Arguments section for clarification.

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 31-42, drawn to an optical sheet.

Group II, claim(s) 43-50, drawn to a method of making a glazing laminate.

3. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the non-metallic optical sheet having layers which are fused along only the peripheral edge, though shared between both inventions as a special technical feature does not define a contribution which each of the claimed inventions considered as a whole, makes over the prior art.

Schrenk et al. (U.S. 5,103,337) discloses a non-metallic (i.e. polymeric based) optical sheet which is disclosed as being vulnerable to delamination (See Abstract and C7, L45-55). Soodak et al. (U.S. 4,945,203) discloses a process for sealing adjacent polymeric films in order to prevent separation (i.e. welding, See Abstract). It would have been obvious to one having ordinary skill in the art to have used to laser cutting and welding method of Soodak et al. along the peripheral edges of the optical sheet of Schrenk et al. in order to reduce the films tendency towards delamination.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrenk et al. (U.S. 5,103,337) in view of Soodak et al. (U.S. 4,945,203).

Regarding claims 31 and 32, Schrenk et al. discloses a non-metallic polymer based optical film which achieves the optical effects of metallic optical films at reduced costs (See Abstract and C1, L15-25 and C1, L60-C2, L10). Schrenk et al. also discloses that delamination of the layers in the film should be avoided (C7, L45-55). Schrenk et al. does not disclose the peripheral sealing of the layers.

Soodak et al. discloses a method of selectively welding the peripheral edges of a multilayer polymeric article (See Abstract, C7, L60-C8, L60). One having ordinary skill in the art at the time of the invention would appreciate that the welding of the peripheral edges of a multilayer laminate would result in improved delamination resistance.

The inventions of both Schrenk et al. and Soodak et al. are drawn to the field of multilayer polymeric articles and therefore it would have been obvious to one having ordinary

skill in the art at the time of the invention to have modified the laminate of Schrenk et al. by welding the peripheral edges as taught by Soodak et al. for the purposes of imparting improved delamination resistance.

8. Claims 33-35, 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrenk et al. (U.S. 5,103,337) in view of Soodak et al. (U.S. 4,945,203) as applied to claim 31 above, and further in view of Fujimori et al. (U.S. 4,368,945).

Regarding claim 33, modified Schrenk et al. discloses all of the limitations as set forth above. Additionally, Schrenk et al. discloses that the optical film of his invention could be used in automobile applications (C1, L40-45). Modified Schrenk et al. does not disclose the use of the optical film in the particular glazing arrangement as set forth in instant claim 33. Fujimori et al. discloses a glazing assembly for use in automobiles which includes two bonding layers, 5 and 5', of PVB on either side of the optically functional layer, 1, in between two sheets of glass, 7 and 7' (See Abstract and Fig. 1). The PVB bonding layers are disclosed as having UV absorbing agents dispersed within their resin compositions (C4, L5-65). While the optical film of Fujimori et al. is metal based it would have been obvious of one having ordinary skill to substitute the polymer based optical film of Schrenk et al. considering the disclosed reduced production costs (C1, L15-25 and C1, L60-C2, L10).

The inventions of both modified Schrenk et al. and Fujimori et al. are drawn to the field of optical film laminates and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the optical film of modified Schrenk et al. by

incorporating it into the glazing assembly with UV absorbing bonding layers as taught by Fujimori et al. for the purposes of imparting improved UV absorbing capabilities.

Regarding claims 34, 35 and 37-42, modified Schrenk et al. discloses all of the limitations as set forth above. Additionally, Fujimori et al. discloses that the PVB layers are press-bonded to the optical film (C3, L50-60). Since the sheets are coextensive, the bonding of the optical film and the PVB layers is considered fully bonded. The peripheral edges of all the layers in the glazing assembly are disclosed as being substantially coextensive (Fig. 1). Since the bonding PVB layers do not surround the exposed edge of the optical film (Fig. 1) the optical film is not fully encapsulated by the bonding layers. Soodak et al. discloses that the layers of the multilayer object, when processed according to his invention, are welded together (See Abstract) which results in the fusion of the layers to the point of intermingling. Since the welding effect is localized along the periphery, the unwelded regions would not be fused. Regarding the width (i.e. instant depth) of the weld area in the cutting operation of Soodak et al., since the disclosure states that defocused (i.e. welding) diameter of the beam can be between 0.25 to 0.5 inches, and since the focused portion (i.e. cutting) of the beam can be blocked through a shutter to facilitate only welding and no cutting, one having ordinary skill in the art would adjust the amount (i.e. thickness) of welded material, relative the non-peripheral, unwelded material, in order to optimize the material strength and delamination resistant properties of the weld.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schrenk et al. (U.S. 5,103,337) in view of Soodak et al. (U.S. 4,945,203) and further in view of Fujimori et al. (U.S. 4,368,945) as applied to claim 33 above, and further in view of Gourio (U.S. 6,334,382).

Regarding claim 36, modified Schrenk et al. discloses all of the limitations as set forth above. Schrenk et al. does not disclose that the optical film extend beyond the peripheral edge of the bonding layers. Gourio discloses an optical laminate in which an optical layers (3 and 2) extends past the bonding layers (9) (Fig. 2). Gourio also discloses that bonding layer 9 can be made into two separate layers on either side of the optical layer (3 and 2) by reducing the gap between portion 3 and portion 2 (C3, L25-50). The extension of the layer (i.e. portion 3) is disclosed as improving impact resistance of the glass laminate (C2, L5-20).

The inventions of both modified Schrenk et al. and Gourio are drawn to the field of optical laminates and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the optical film layer dimensions of modified Schrenk et al. by extending the layer as taught by Gourio for the purposes of imparting improved impact resistance.

Response to Arguments

10. In response to applicant's arguments against the restriction requirement directed toward the locality of the bonding of the layers in the film, the examiner would like to point out that while the limitation directed to the layers being fused "along a substantial portion of only the peripheral edge" does in fact impose the positive limitation that the layers be fused selectively over the peripheral edge of the film, it does not, as currently drafted, limit the film from being also bonded, in a separate step, along the entire major surface. This issue was raised by the applicant in relation to the previous restriction requirement, which has already been addressed, and is mentioned by the examiner only to make the applicant aware of the more implicit nature of the limitation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MN/
09/22/08

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794